Chesterfield Fire and EMS

Fire and Life Safety Division

Fire Alarm System

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FIRE ALARM SYSTEM

NFPA – 72 (1993), BOCA NATIONAL BUILDING CODE - Chapter 9 (1996)

Project Name : _____

Project Address : _____

Building Permit # : _____ Date : _____

Code Edition: _____

All supporting documentation showing items listed below are required for review. The checklist is based on the 1993 Edition – NFPA 72.

General (All submissions shall include the following):

☐ A minimum of four copies of shop drawings, calculations and submittal data shall be provided with the permit application permitting evaluation of the system **PRIOR TO** installation. The permit application shall clearly designate the system as being **required** for compliance with Virginia Uniform Statewide Building Code, or installed as an **elective** system at the discretion of the owner.

☐ Name and address of project or tenant where system will be installed; include associated building permit number with project.

☐ Name, address and telephone number of designer of fire alarm system.

☐ Drawings are to be uniform in size and drawn to a recognized scale.

☐ Floor plan to scale or dimensioned for verification of device spacing showing the layout of the building including walls and/or partitions. Include location of fire rated assemblies and indicate how the rated assemblies will be maintained when penetrated by equipment and/or wiring. Indicate what each room or space is to be used for by the occupants. (BOCA 714.0)

☐ Device to device wiring arrangement, in the plan view, in the structure from fire alarm panel to all devices, inclusive of last device, indicating location of end of line resister where applicable for clarity of system. Indicate style of wiring used for determining how system will respond to different conditions associated with the functionality. Indicate size of wiring, number of conductors used, and protection methods required by NFPA 70. NFPA-72, 3 -5.1)

☐ Location and number of all alarm-initiating devices and alarm-notification appliances in the plan view. Indicate mounting height of all devices, and where required to be provided with ceiling mounted initiating devices, (smoke detectors, heat detectors, beam detectors, etc.) indicate type of ceiling layout (flat, cathedral, sloped, peaked, solid joist construction, etc.) and device mounting detail. (NFPA 72-chapter 5)

☐ Location of all fire alarm controls panels, annunciator panels, digital communicator or other off-site premises reporting devices. (BOCA 918.2)

☐ Indicate how each fire alarm zone is designed in the building to meet provisions of the manufacturer's accepted practices (number of devices permitted on a zone) and/or as required by the Virginia Uniform Statewide Building Code (per floor, maximum of 20,000 square feet, and/or maximum of 300 feet in any direction). (BOCA 918.7.3)

☐ When applicable, a scaled cross-section of detector mounting locations for door closure operation in accordance with NFPA 72, 5-11.7.

RISER DIAGRAM

☐ Provide a single line riser diagram for devices on the fire alarm system for:

- ☐ Initiating devices
- ☐ Indicating devices
- ☐ Elevator capture
- ☐ Door hold open functions
- ☐ Special locking devices
- ☐ HVAC controls

STAND ALONE INFORMATION

☐ Verify size of HVAC systems in CFM rating to determine requirement for duct mounted smoke detectors. **Contractors shall be capable of performing air pressure differential testing at smoke detector to verify proper placement of the device.** (NFPA 72-5-11.6.)

☐ Source of primary and secondary power. Provide calculations for all secondary power sources as required for type equipment to be installed. (NFPA 72-1-5.2.3)

☐ Method of communications with monitoring agencies and number of telephone lines used for the transmission. (NFPA 72-4-2.3.2.1.1, 4-2.3.2.1.6)

☐ Manufacturer's data sheets on all equipment used in the system. Where manufacturer's data sheets cover multiple devices, indicate those devices used in the system. Specifically provide information for the Digital Alarm Communicator Transmitter (DACT) programming options.

- ☐ DACT
- ☐ Smoke detectors
- ☐ Heat detectors
- ☐ Pull stations
- ☐ Duct detectors
- ☐ All sprinkler attachments (water flow, tampers and pressure switches)
- ☐ All other initiating devices attached to the FACP
- ☐ Control functions
- ☐ All control relays
- ☐ Special locking devices
- ☐ Notification devices
- ☐ Audio/visual appliances
- ☐ Other - _____

☐ Name, address, and telephone number of company monitoring the fire alarm system. Indicate if the company is a UL Listed Central Station or Remote Station.

☐ Provide a signal schedule to include the following information for **INTELLIGENT SYSTEMS:**

POINT (A)	TYPE OF SIGNAL (B)	ALPHA NUMERIC NOMENCLATURE (C)	LOCAL FUNCITON (D)	OFF SITE SIGNAL (E)

POINT – Designation by designer of numeric point

TYPE OF SIGNAL – Alarm, Supervisory, or Trouble signal

ALPHA NUMERIC NOMENCLATURE – Type of initiating device (Manual Pull, Sprinkler Water Flow, HVAC Smoke Detector, OS & Y Tamper Switch, PIV Tamper Switch, etc.)

LOCAL FUNCTION – Fire alarm system (A.V activation, Panel trouble, Panel Supervisory)

OFF/SITE SIGNAL – Generic/Specific signal correlating with each point as transmitted to monitoring company.

NOTE: ARE MULTIPLE COMMON SIGNAL TYPES GROUPED TO TRANSMIT A GENERIC SIGNAL TO MONITORING SOURCE?

DOES EACH POINT/ZONE TRANSMIT DISTINCTIVELY TO MONITORING SERVICE?

☐ Provide a signal schedule to include the following information for **NON-INTELLIGENT SYSTEMS:**

ZONE (A)	TYPE OF SIGNAL (B)	ZONE DESCRIPTION (C)	STATUS OF FIRE ALARM SYSTEM (D)	OFF SITE SIGNAL (E)

POINT – Designation by designer of numeric point

TYPE OF SIGNAL – Alarm, Supervisory, or Trouble signal

ZONE DESCRIPTION – Floor level or area of zone.

STATUS OF FIRE ALARM SYSTEM – Fire Alarm System Status (A/V activation, Panel Trouble, Panel Supervisory)

OFF/SITE SIGNAL – Generic/Specific signal correlating with each point as transmitted to monitoring company.

NOTE: ARE MULTIPLE COMMON SIGNAL TYPES GROUPED TO TRANSMIT A GENERIC SIGNAL TO MONITORING SOURCE?

DOES EACH POINT/ZONE TRANSMIT DISTINCTIVELY TO MONITORING SERVICE?